

## ABSTRACT OF THE DISCLOSURE

A circuit, system, and method is provided for regulating the pulse width and/or duty cycle of a signal indirectly or directly used to drive, e.g., a transmitter. The load of the transmitter can be, for example, an optical signal transmitter. The circuit includes a feedback loop that adjusts the output signal so that the lower voltages are chopped at a reference voltage input into the driver. The magnitude of the reference voltage will regulate the pulse width of the output signal, as well as the duty cycle of the output signal.

A low input voltage swing is well-suited to be operated upon by the driver circuit to produce a symmetric pulse width that is particularly adapted to high-speed optical data communication applications. The gain and slew rate of the feedback circuit and, predominantly, the comparator and pull-down transistor of the feedback circuit is tuned to ensure the pull-down transistor is always on and, therefore, the comparator will toggle, but within constrained (i.e., regulated) voltage limits.

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